

Chapter 1

Introduction

The U.S. Department of Energy's (DOE's) National Environmental Policy Act (NEPA) Implementing Procedures at 10 CFR 1021.330(d) require evaluation of its site-wide environmental impact statements (EISs) at least every 5 years by preparation of a supplement analysis (SA), as provided in 10 CFR 1021.314. Based on the SA, a determination is made as to whether the existing EIS remains adequate, or whether preparation of a new site-wide EIS, or a supplement to the existing EIS, is appropriate. This SA is prepared in accordance with those requirements.

1.1 Background

The Pantex Plant is located in the Texas Panhandle, approximately 27 km (17 mi) northeast of Amarillo, Texas. Figure 1–1 shows the location of the plant. The Pantex Plant was originally built for the U.S. Army during the early days of World War II with the mission of producing conventional munitions, bombs, and artillery projectiles. After the war, the plant was deactivated and remained vacant until 1949, when Texas Technological College (now Texas Tech University [TTU]), purchased the site for \$1.00. In 1951, the main plant and surrounding land were reclaimed under the recapture clause of the sales agreement for the Atomic Energy Commission (DOE's predecessor), and used for nuclear weapons assembly operations. Since that time, all nuclear weapons assembly and disassembly operations in the United States have been transferred to, and occur at, the Pantex Plant (DOE 1996a).

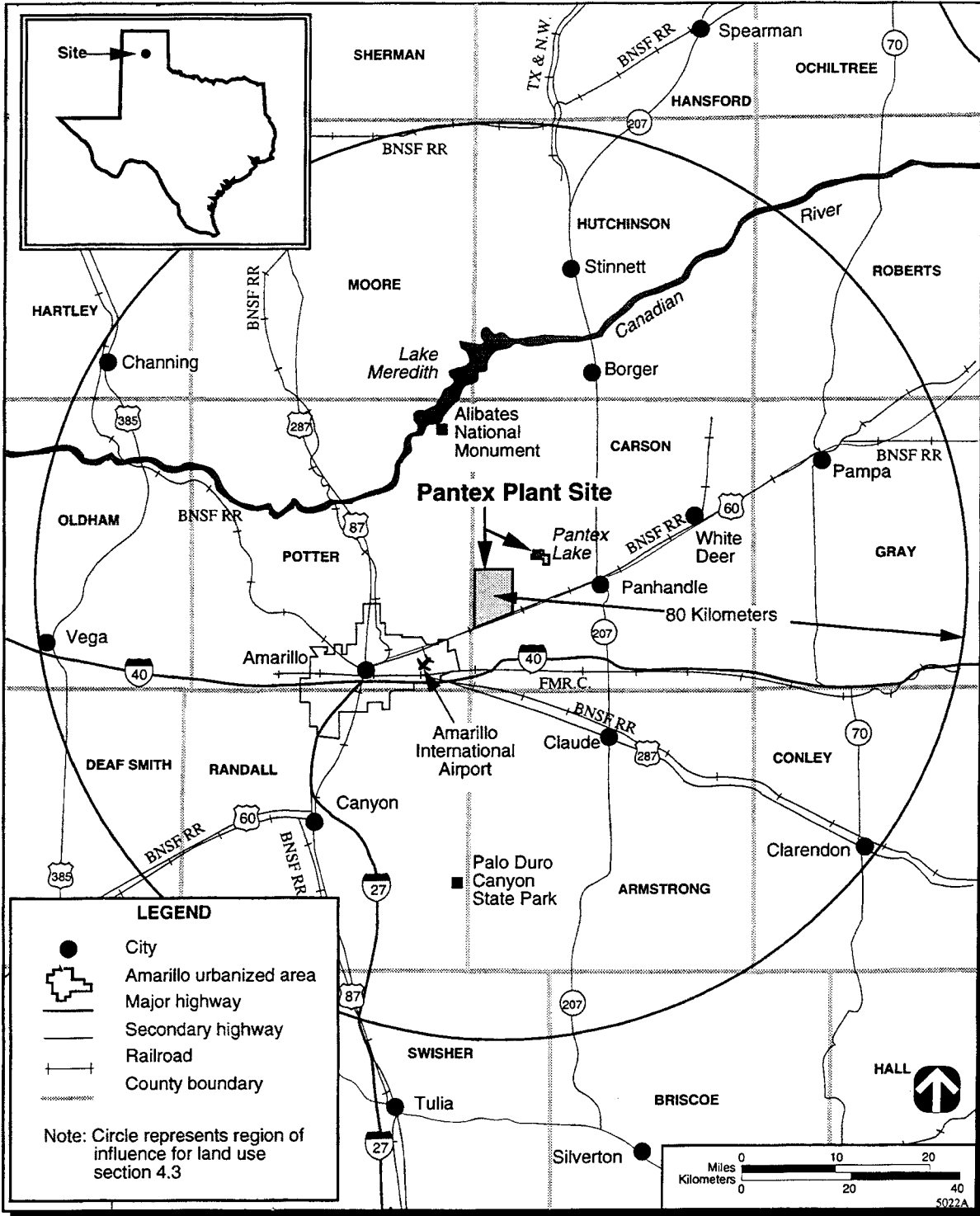
In fiscal year 2001, two major administrative changes affected the Pantex Plant. First, the National Nuclear Security Administration was formed as a separate agency within DOE responsible for providing the United States with nuclear weapons, ensuring the safety and reliability of those weapons, and supporting programs that reduce global nuclear proliferation. Second, BWXT Pantex was selected as the plant's new management and operating contractor. Neither of these changes has affected the Pantex Plant's primary missions.

1.2 Purpose of and Need for the Supplement Analysis

DOE issued the *Final Environmental Impact Statement for the Continued Operation of the Pantex Plant and Associated Storage of Nuclear Weapon Components* (SWEIS) in November 1996 (DOE 1996a). The SWEIS assessed impacts relative to each area of the human and natural environment potentially affected by operations performed at the Pantex Plant between 1996 and 2006. The SWEIS evaluated activities associated with ongoing operations, including pit¹ storage; transporting pits to and storing them on an interim basis at an alternate site; and transporting classified components between the Pantex Plant and other sites. The analysis assumed that the combined activities of assembly, disassembly, and modifications would not exceed 2,000 weapons per year, and assessed impacts of activity levels for 2,000, 1,000, and 500 weapons per year. These activity levels were considered to represent a reasonable, but conservative, estimate of work that could be required based on policy directives at that time.

The Proposed Action, also the Preferred Alternative in the SWEIS, involves continuing operations at the Pantex Plant, increasing the pit storage limit from 12,000 pits up to 20,000 pits, and constructing several new facilities in which to implement new projects or transfer existing activities. Availability of the Draft

¹ An assembly at the center of a nuclear device containing a sub-critical mass of fissionable material.



Source: DOE 1996a.

Figure 1-1. Location of the Pantex Plant Site in the Texas Panhandle

SWEIS for public comment was announced in March 1996 (61 *Federal Register* [FR] 15232); availability of the Final SWEIS was announced in December 1996 (61 FR 65563).

The Record of Decision (ROD) was published in the *Federal Register* on January 27, 1997 (62 FR 3880). DOE decided to implement the preferred alternative evaluated in the SWEIS by (1) continuing nuclear weapon operations involving assembly and disassembly of nuclear weapons at the Pantex Plant; (2) implementing facility projects, including upgrades and construction consistent with conducting these operations; and (3) continuing to provide interim pit storage at the Pantex Plant and increasing the storage level from 12,000 to 20,000 pits.

This SA fulfills DOE's requirement to review site-wide EISs at least every 5 years to determine the adequacy of the assessment. In accordance with 10 CFR 1021.314, a SA must contain sufficient information for DOE to determine whether an existing EIS should be supplemented, a new EIS should be prepared, or no further NEPA documentation is required. This SA accomplishes that requirement by reviewing the Proposed Action, missions and impacts identified in the SWEIS against changes or proposed changes in missions, activities, programs and impacts identified in current Pantex Plant documents or through discussions with Pantex Plant personnel.

1.3 Programmatic Issues and Mission Changes Since the SWEIS

1.3.1 Basis for Analysis in the SWEIS

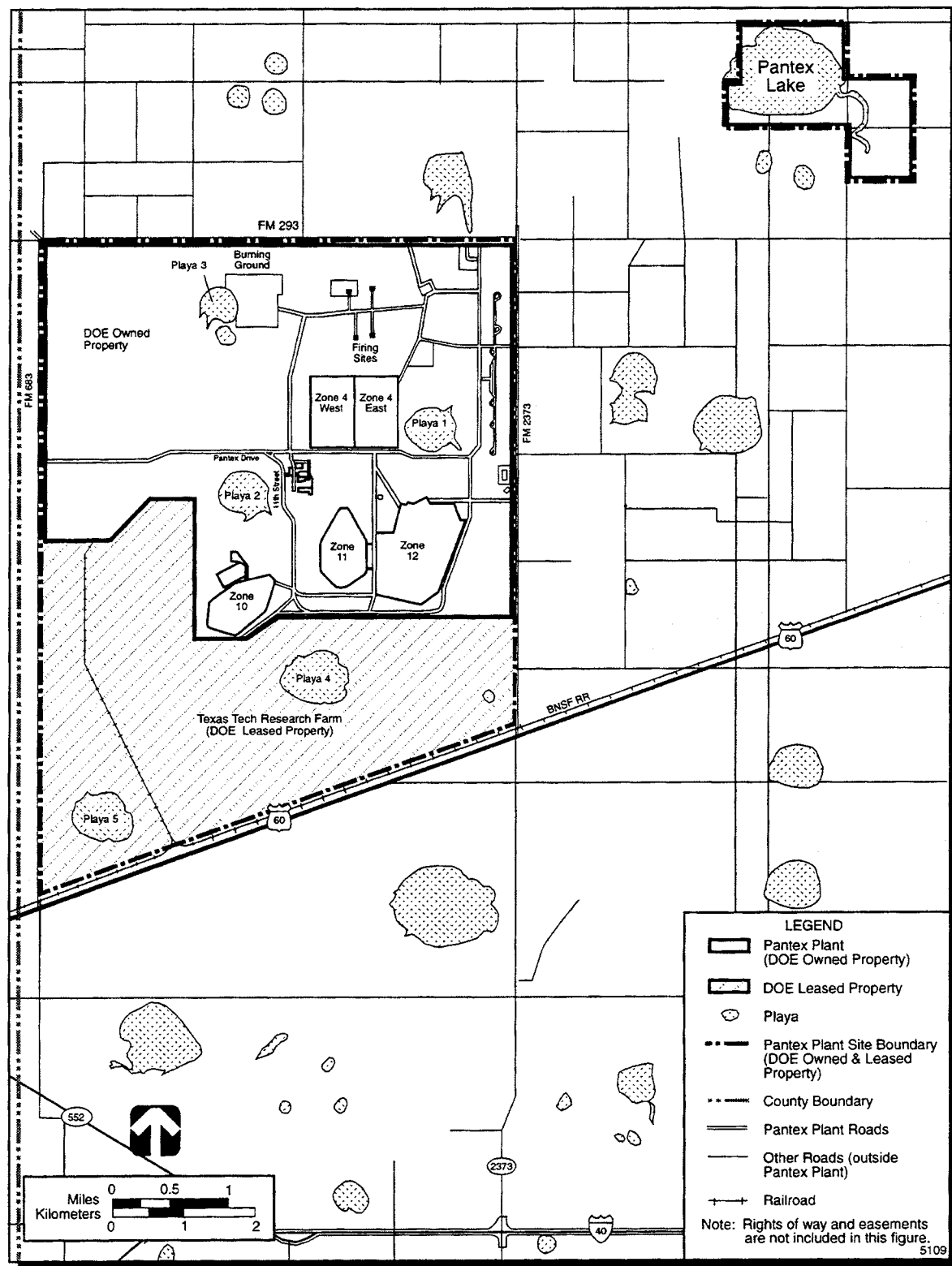
The SWEIS identifies the following programmatic missions for the Pantex Plant:

- Fabricate chemical high-explosive (HE) components for nuclear weapons
- Assemble nuclear weapons for the Nation's stockpile
- Maintain and evaluate nuclear weapons in the stockpile
- Disassemble nuclear weapons being retired from the stockpile
- Store plutonium pits from dismantled weapons on an interim basis.

The individual operations conducted at the Pantex Plant to support these programmatic missions and analyzed within the scope of the SWEIS include the assembly and disassembly of nuclear weapons, maintenance and modification activities regarding the nuclear weapons stockpile, stockpile evaluation, quality assurance testing of weapon components, and research and production of HE components for nuclear weapons. Related activities include certain quality assurance evaluations of weapons; research and development activities supporting nuclear weapons; sanitization of weapon parts, equipment, and related materials; waste management; environmental restoration (ER); and onsite transportation, as required.

The key areas of the Pantex Plant (see Figure 1–2) identified in the SWEIS that support these missions are:

- Zone 12, where assembly, disassembly, and surveillance operations are performed and nonnuclear components are staged



Source: DOE 1996a.

Figure 1-2. Location of Key Areas at the Pantex Plant

- Zone 11, where HE research and production occur and nonnuclear components are staged
- Zone 4 West, where nuclear weapons and classified components are staged, and pits are stored on an interim basis
- Zone 4 East, where HE is stored and nonnuclear components are staged
- The Burning Ground, where HE material is burned.

1.3.2 Mission Changes Since the SWEIS

The *Programmatic Information Document* (PID) (BWXT Pantex 2001a) and the *Pantex Plant 10-Year Comprehensive Site Plan* (BWXT Pantex 2001b) provide descriptions of ongoing, planned, and proposed activities. These documents were reviewed to identify potential missions and specific project activities for the analyses in this SA. The PID identifies the primary missions of the Pantex Plant as:

- Assemble nuclear weapons for the Nation's stockpile
- Disassemble nuclear weapons being retired from the stockpile
- Evaluate, repair, and retrofit nuclear weapons in the stockpile
- Sanitize components from dismantled nuclear weapons
- Provide interim storage for plutonium pits from dismantled nuclear weapons
- Develop, fabricate, and test explosives and explosive components for nuclear weapons and to support DOE initiatives
- Provide through the Enhanced Surveillance Program the predictive models and age-focused diagnostics required to anticipate weapons refurbishment
- Provide the production complex with advanced capabilities for designing, developing, and certifying components and systems through Advanced Design and Production Technologies.

Some of these missions, although broader in scope, are a natural extension of the missions identified in the SWEIS. No major changes in the plant's primary missions are anticipated during the next 5 years, the remaining timeframe associated with the SWEIS (2002–2006). Some potential new capabilities have been identified, none of which is developed or expected to be implemented before 2006. They are therefore not evaluated in this SA. The Pantex Plant is being considered as a site for a Modern Pit Facility, a new facility to manufacture plutonium pits. DOE announced its intent to prepare a Supplemental Programmatic EIS on Stockpile Stewardship and Management for a Modern Pit Facility in September 2002 (67 FR 59577) to decide whether to proceed with a Modern Pit Facility, and if so, where it should be located. Five DOE sites, including the Pantex Plant, are being evaluated in the Supplemental EIS as potential locations for the facility.

1.3.3 Key New or Modified Projects Since the SWEIS

Six proposed projects were at a sufficient stage of development in 1996 to be included in the SWEIS analysis. These projects are the Hazardous Waste Treatment and Processing Facility (HWTPF), Pit Reuse Facility, Gas Analysis Laboratory (GAL), Materials Compatibility Assurance Facility (MCAF), Nondestructive Evaluation Facility (NDEF), and Metrology and Health Physics Calibration and Acceptance Facility. These facility construction and upgrade projects were proposed for locations in or near Zones 11 and 12, and were needed to meet explosives, safety, seismic or tornado criteria; streamline efficiency of continued operations; maximize worker safety; reduce existing facility footprints; or meet regulatory requirements. The HWTPF has been constructed. The Pit Reuse Facility and the Metrology and Health Physics Calibration and Acceptance Facility have been redesigned for incorporation into modified, existing facilities. The GAL, MCAF, and NDEF have been combined into a single, new proposed facility, the NDE/Gas Laboratory. The current status of these projects is discussed in the remainder of this section.

Hazardous Waste Treatment and Processing Facility (HWTPF). The HWTPF evaluated in the SWEIS was a new 2,650-m² (28,500-ft²) facility located between Zones 11 and 12 that would accommodate the treatment and processing of hazardous waste (HW), low-level radioactive waste (LLW), and low-level mixed waste (LLMW). Construction of the HWTPF was completed in December 1999, and incorporated several design changes from the facility evaluated in the SWEIS. These design changes include construction of a separate Liquid Processing Facility to process flammable liquids, elimination of forklift airlocks and overhead hoists from the main HWTPF, the capability to handle classified material, elimination of a shipping dock, and construction of a ramp connecting the HWTPF with the adjacent Resource Conservation and Recovery Act (RCRA) Hazardous Waste Staging Facility.

Pit Reuse Facility. As described in the SWEIS, this proposed facility would be located inside an existing facility in Zone 12. Approximately 490 m² (5,300 ft²) of an existing building in Zone 12 were to be modified and approximately 465 m² (5,000 ft²) of new support structures were to be constructed to accommodate this project, which provides for the non-intrusive modification of certain pits obtained from nuclear weapons dismantlement to enhance their safety and allow for their future reuse (DOE 1996a:3-4, 3-6, H-12-H-16). This facility has not been built. Instead, its capabilities have been incorporated into the proposed Special Nuclear Material Component Requalification Facility (SNMCRF), with construction scheduled for completion in 2005. In accordance with the ROD for the *Stockpile Stewardship and Management Programmatic Environmental Impact Statement* (SSM PEIS) (61 FR 68014), the SNMCRF will use non-intrusive processes to recertify and requalify up to 350 pits for reuse annually, a small number of which may be non-intrusively modified before being returned to the stockpile for reuse. Since the recertification and requalification processes are less extensive than the reuse activities identified in the SSM PEIS (DOE 1996b) and the SWEIS, processing 350 pits per year is an equivalent workload criterion to the 270 pits per year established in the SSM PEIS (BWXT Pantex 2001c:2).

Approximately 1,400 m² (15,000 ft²) of space in a building in Zone 12 will be reconfigured to meet DOE Order 6430.1A requirements for a Hazard Category II Non-Reactor Nuclear Facility for the SNMCRF. The activities that will be performed in this facility will reduce the need for fabrication of new special nuclear material (SNM) components, which will appreciably reduce the amount of radioactive waste generated in the DOE complex. The recertification and requalification of existing components will utilize methodologies, processes, and techniques in support of environmental and waste management mission objectives, and will incorporate systems to preclude external releases by use of engineered controls. Waste generated by SNMCRF operations would not result in new contaminants or waste streams beyond those already addressed in the SWEIS and the SSM PEIS (BWXT Pantex 2001c:2, 4, 14, 15). A NEPA review completed in May 2002 indicated that the current project activities were within the analyses

performed in the SWEIS (BWXT Pantex 2002a). The potential impacts of the SNMCRF are discussed throughout this SA in the appropriate resource sections.

Metrology and Health Physics Calibration and Acceptance Facility. This facility was analyzed in the SWEIS as a new, approximately 4,500-m² (48,000-ft²) facility to be constructed in Zone 12 for performing health physics calibration and product acceptance control in support of the plant's assembly and disassembly programs. The SWEIS ROD announced DOE's subsequent decision to move the proposed facility into an available vacated structure rather than construct a new facility. This facility is no longer identified as a major Line Item project. Rather, it is now planned that metrology capabilities will be combined with other functions and moved to modified existing space in Zone 12. This project is currently identified for 2007, and is not evaluated in this SA.

Gas Analysis Laboratory/Materials Compatibility Assurance Facility/Nondestructive Evaluation Facility. The SWEIS analyzed the proposed construction and operation of separate, new facilities for a 2,500-m² (27,000-ft²) GAL and an approximately 2,040-m² (22,000-ft²) MCAF near Zone 11, and an approximately 3,700-m² (40,000-ft²) NDEF in Zone 12. The SWEIS ROD announced DOE's decision to locate the capabilities of these proposed facilities in vacated structures rather than construct new facilities. More recently, this project proposes to combine the capabilities of the GAL, the MCAF, and the NDEF into the NDE/Gas Laboratory, a single 4,500-m² (48,000-ft²) facility that would be located in Zone 12. Construction is scheduled for 2008–2012, so this project is not evaluated in this SA.

Since issuance of the SWEIS, plans for some projects have been modified, new projects have been initiated, and additional future projects have been proposed. Table 1–1 identifies key projects and activities that have been modified, initiated, or proposed since the SWEIS was published; indicates the level of NEPA review; and provides the current status of each project. The table is divided into three categories: projects that are revisions to or include components of the six specific projects originally evaluated in the SWEIS, projects initiated from November 1996 through December 2001, and projects planned for implementation from 2002 through 2006. Included in the table are Line Item projects and other projects with proposed budgets of \$5 million or more, as well as additional projects or issues that have been specifically identified for inclusion in this SA by BWXT Pantex.

In addition to these projects and activities, there is an initiative to deactivate and ultimately dispose of or demolish excess facilities to reduce or prevent the expenditure of resources on obsolete structures not needed to support the Pantex Plant's mission. This will allow the redirection of funds being spent on excess facilities to active facilities and infrastructure required for the mission (BWXT Pantex 2001b:7-15). Demolition began in 2001, with a single facility of approximately 930 m² (10,000 ft²) (Holeman 2002). For the 2002–2006 timeframe, demolition of facilities totaling approximately 16,440 m² (177,000 ft²) has been proposed (BWXT Pantex 2002b).

Table 1–1. New or Modified Key Projects Initiated or Planned Since the SWEIS

Revisions to the Six Projects Originally Evaluated in the SWEIS		
Title of Project/Activity	Project/NEPA Status	Discussion
Hazardous Waste Treatment and Processing Facility ^a	Construction completed 1999. Supplement Analysis approval signed February 2000; start-up completed 2001.	This project was initiated in 1992 and was included as one of the six specific projects addressed in the SWEIS; the SA, completed in 2000, addresses changes in the design from that analyzed in the SWEIS and determined the impacts to be negligible.
Special Nuclear Material Component Requalification Facility ^a	Design work 2002–2004; construction 2004–2005. DOE approval of mission need (CD-0) received July 2001. NEPA review completed May 2002.	This project's predecessor (the Pit Reuse Facility) was one of the six specific projects addressed in the SWEIS, requiring modification to an existing building and 5,000 ft ² of new space. Project now called Special Nuclear Material Component Requalification Facility, and does not require construction of new space.
NDE/Gas Laboratory ^a	Planned Line Item project; construction 2008–2012. Project currently unsupported by DOE/NNSA. NEPA analysis will be performed when appropriate.	This project combines three of the six specific projects addressed in the Pantex SWEIS (the Gas Analysis Laboratory, the Nondestructive Evaluation Facility, and the Materials Compatibility Assurance Facility) into a 48,000-ft ² facility in Zone 12 South. Because of the implementation schedule, this project is not evaluated in this SA.
Metrology/Maintenance Relocation/Consolidation ^a	General Plant project planned for 2007. NEPA analysis will be performed when appropriate.	The remaining specific project addressed in the Pantex SWEIS, the Metrology and Health Physics Calibration and Acceptance Facility, is no longer a Line Item project. These functions are now planned for modified space in existing buildings. Because of the implementation schedule, this project is not evaluated in this SA.
Projects Initiated from November 1996 through December 2001		
Title of Project/Activity	Project/NEPA Status	Discussion
Wastewater Treatment Facility Upgrade	Beneficial Occupancy 2002. Finding of No Significant Impact issued May 1999.	Proposed action to upgrade the existing Wastewater Treatment Facility by constructing and operating two new lagoons and interconnecting drip irrigation pipeline on 8 acres of grazing land being used by Texas Tech University. (The drip irrigation pipeline has not been permitted by TCEQ).
Pit Repackaging in the AL-R8 Sealed Insert Container	Supplement Analysis determination signed August 1998.	The SWEIS evaluated storage of pits using the AT-400A container. SA was completed to evaluate potential impacts of using AL-R8 Sealed Insert container.

Projects Initiated from November 1996 through December 2001 (Continued)		
Title of Project/Activity	Project/NEPA Status	Discussion
Stockpile Management Restructuring Initiative	Phased completion in fiscal years 2002–2004. Each activity categorically excluded from NEPA analysis under 10 CFR 1021 Subpart D, Appendix B; Section B1.31. 35 Account relocation—construction to be completed 2002. Mass Properties Equipment Installation—construction to be completed 2003. Relocation of HE Formulation Activities—construction to be completed 2004.	Three activities funded under the Stockpile Management Restructuring Initiative: 35 Account Relocation—Relocates and consolidates 35 Account activities, i.e., warehousing of supplies for weapons production (M&H 2000a). Mass Properties Equipment Installation—Installation of spin balancing machines to replace existing equipment performing same functions (mass properties testing) that contain oil determined to be a fire hazard (M&H 2000b). Relocation of HE Formulation Activities—Relocates HE operations currently performed in World War II-vintage buildings to a newer building that meets current design requirements and is a blast-resistant structure designed to support HE Class I and II operations (M&H 2000c).
Environmental, Safety and Health Analytical Laboratory	Beneficial occupancy August 2002. Original EA approved July 1995 (DOE 1995); modified project categorically excluded from NEPA analysis under 10 CFR 1021 Subpart D, Appendix B; Section B3.6 (M&H 2000d).	A new 16,400-ft ² facility was evaluated in an EA (DOE 1995) prior to the SWEIS. Instead, an 8,300-ft ² addition to an existing analytical laboratory building has been constructed.
Continued Storage of Pits in Zone 4	Ongoing project. Amended Record of Decision issued April 2002.	The Amended Record of Decision for the <i>Storage and Disposition of Weapons-Usable Fissile Materials Final Programmatic EIS</i> and <i>Surplus Plutonium Disposition EIS</i> issued April 2002 states DOE's decision to continue to store pits indefinitely in both Zones 4 and 12.
Stage Right Automated Guided Vehicle Pit Storage System	Ongoing project. Evaluated in SSM PEIS; modifications categorically excluded from NEPA analysis under 10 CFR 1021 Subpart D, Appendix B; Section B1.15.	Automated system for storage and retrieval of weapons pallets in both Zones 4 and 12. Some building modifications have been completed. Additional construction is not currently funded.
Projects Planned for Implementation from 2002 through 2006		
Title of Project/Activity	Project/NEPA Status	Discussion
Heat Source/Radioisotope Power System Assembly and Testing and Operations	EA and Finding of No Significant Impact issued August 2002.	DOE evaluated relocation of Heat Source/Radioisotope Power System operations from the Mound Site. The Pantex Plant is one of the locations considered as an alternative in the EA. This project involves manufacturing heat sources/radioisotope power systems that contain plutonium-238 and would be a new mission for the Pantex Plant. Finding of No Significant Impact indicates that selection of any of the alternative locations would not significantly affect the quality of the human environment (DOE 2002).

Projects Planned for Implementation from 2002 through 2006 (Continued)		
Title of Project/Activity	Project/NEPA Status	Discussion
Accelerated Aging Unit Program	Potential future project. Project currently unsupported by DOE/NNSA. NEPA analysis will be performed when appropriate.	Potential restart of operations using environmental chambers currently at the Pantex Plant. This mission was identified in the SWEIS under Stockpile Evaluation. Accelerated Aging Unit testing, was conducted at Pantex Plant from 1971 through 1994. Because the implementation schedule is unknown at this time, this project is not evaluated in this SA.
Relocation of Weapons Evaluation Test Laboratory Facility	Construction FY 2002–2004. Categorically excluded from NEPA analysis under 10 CFR 1021 Subpart D, Appendix B; Section B3.6.	Project includes construction/operation of a new 30,000 ft ² -facility and relocation of existing equipment. Sandia National Laboratories operates this facility at Pantex Plant.
Building 12-044 Production Cells Upgrade	Design work 2002–2004; construction 2004–2006. DOE approval of mission need (CD-0) received February 2002. Funding anticipated. Activities evaluated under <i>Routine Administrative and Operating Activities Planned at Pantex Plant for FY2001 and FY2002</i> , approved August 2000.	Modifications to each of five cells (totaling approximately 21,500 ft ²) include installation of task exhaust, contaminated waste isolation, and dehumidifiers, and replacement of the HVAC system.
Roof Repairs	Design and implementation of repairs to Buildings 12-84, 12-86, 12-99, and 12-104 began in 2002; for balance of plant, design work 2004–2005; construction 2005–2008. Project received FY 2001 Supplemental FY 2002 Facilities and Infrastructure Recapitalization Program funding; additional funding anticipated. Activities evaluated under <i>Routine Administrative and Operating Activities Planned at Pantex Plant for FY2001 and FY2002</i> , approved August 2000.	Design, construction, and management of roofing problems at Pantex Plant, including the site-wide re-roofing of approximately 1 million ft ² over 9 years. These are individual projects for which NEPA reviews have been performed as funding has been received.

Projects Planned for Implementation from 2002 through 2006 (Continued)		
Title of Project/Activity	Project/NEPA Status	Discussion
Building 12-064 Production Bays Upgrade	Design work 2003–2005; construction 2005–2006. DOE approval of mission need (CD-0) received February 2002. Funding anticipated. Activities evaluated under <i>Routine Administrative and Operating Activities Planned at Pantex Plant for FY2001 and FY2002</i> , approved August 2000.	Modifications to each of 17 bays (totaling approximately 32,000 ft ²) include installation of task exhaust, seamless flooring, ultraviolet detection system, high-speed deluge system, lightning bond, and new hoists. Also includes removal of asbestos on piping and replacement of the dehumidifier system, HVAC, and roof.
High Explosive Pressing Facility	Design work 2004–2006; construction 2006–2008. DOE Approval of Mission Need (CD-0) will be requested First Quarter FY03. Initial funding is anticipated in FY04.	Design and construction of an approximately 45,000-ft ² facility in Zone 11 that will include a main pressing facility, a magazine storage area, and a ramp. Will replace facilities that are scheduled for demolition. Because of the implementation schedule, this project is not evaluated in this SA.
Component Evaluation Facility	Design work 2005–2006; construction 2007–2008. DOE approval of mission need (CD-0) not received, but project supported by DOE/NNSA. Funding is anticipated.	Design and construction of an approximately 96,000-ft ² facility in Zone 12 South, to consolidate and increase capability for surveillance and requalification of weapons, including 15 evaluation bays for computer tomography, separation tests, mass properties analysis, and other weapon evaluation tests. Will allow existing bays to be returned to weapons assembly/disassembly operations. Because of the implementation schedule, this project is not evaluated in this SA.
Modern Pit Facility	Notice of Intent for Supplemental EIS for SSM PEIS issued September 2002; draft Supplemental EIS scheduled for May 2003.	Pantex Plant is one of five DOE sites being considered as a location for a new facility to manufacture plutonium pits. Pit manufacture supports the Administration's Nuclear Posture Review, which states that the ability to produce pits is important to ensure the future viability of the nation's nuclear deterrent.

^a These projects were originally addressed under the specific facility and construction upgrades included in the SWEIS Proposed Action.

Key: CD, critical decision; CX, categorical exclusion; DOE/NNSA, Department of Energy/National Nuclear Security Administration; EA, environmental assessment; FY, fiscal year; HE, high explosive; HVAC, heating, ventilating, and air conditioning.

Sources: BWXT Pantex 2001a:Appendix A; 2001b:5-2, 5-3; Tables 7-5, 7-6, and C-3; Appendix E; Nester 2002a.

1.4 Operating Basis

As discussed in Section 1.2, the SWEIS assessed impacts of Pantex Plant operations at a maximum activity level of 2,000 weapons per year², and interim storage of up to 20,000 pits. As part of the proposed action, the SWEIS also evaluated repackaging as many as 20,000 pits into AT-400A containers. In a SA, DOE evaluated repackaging of pits in AL-R8 sealed insert (SI) containers instead of AT-400A containers. This analysis concluded that use of the AL-R8 SI pit storage container is within the

² The activity levels evaluated in the SWEIS were based on policy directives in place at that time and that are still valid.

parameters of the SWEIS, would result in lower worker doses during repackaging operations, and could be completed in a shorter timeframe (DOE 1998). There are approximately 12,600 pits in storage at this time (Ufford 2002). Table 1–2 provides the actual and predicted weapons workload and the number of pits repackaged into AL-R8 SI containers per year for 1996–2006. Repackaging of the current inventory is scheduled to be complete by the end of 2005 (Rhodes 2002).

Table 1–2. Weapons Work Since the SWEIS, Fiscal Years 1996–2006

Activity	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Weapons Assembly/Disassembly ^a (units)	1,976	884	1,422	591	636	530	985 ^b	689	584	660	589
Pit Repackaging ^c (pits)	0	18 ^c	18 ^c	917	2,046	1,600	2,400	2,400	2,400	2,400	0

^a Includes dismantlement, evaluation, maintenance, and repair units. Actuals for 1996–2002 (Nester 2002b); estimates for 2003–2006 (BWXT Pantex 2001b:4-3).

^b Nester 2002c.

^c A total of 18 units were processed in FY 97 and 98; actuals for 1996–2002; projection for 2003–2006 (Rhodes 2002).

The ROD for the *Storage and Disposition of Weapons-Usable Fissile Materials Programmatic Environmental Impact Statement (Storage and Disposition PEIS)* announced that surplus pits stored in Zone 4 (as well as surplus pits transferred from Rocky Flats Environmental Technology Site) would be stored in upgraded facilities in Zone 12 by 2004. An April 2002 amended ROD for the *Surplus Plutonium Disposition EIS* and *Storage and Disposition PEIS* (67 FR 19432) announced DOE's plans to continue to store surplus pits in Zone 4 pending disposition at the Savannah River Site. As discussed in the ROD, DOE had intended to relocate all pits in storage at the Pantex Plant to upgraded facilities in Zone 12 and to eventually discontinue use of Zone 4. However, further analysis of mission needs determined that Zone 4 would likely be needed well into the future, so cost savings initially postulated from closure of Zone 4 would not be realized; and there is adequate storage space in Zone 4 to accommodate both the surplus pits and dismantlement activities. Additionally, the Defense Nuclear Facilities Safety Board expressed concerns about storing both the surplus and strategic pits in Zone 4. As stated in the amended ROD, storage of surplus pits in Zone 4 is ongoing and consistent with current storage practices and was evaluated as part of the No Action Alternative in the *Storage and Disposition PEIS*.

1.5 NEPA Activities Since the SWEIS

New projects and modifications to existing projects have been initiated since the SWEIS was issued, and have been described and evaluated in environmental assessments, supplement analyses, NEPA-related documents, and NEPA review forms in accordance with Pantex Plant Standard Number 3062, *Preparation of Documentation for Compliance with the National Environmental Policy Act*. The status of the NEPA documentation associated with key new or modified projects is presented in Table 1–1. In addition to the key projects and activities identified in Table 1–1, checklists, NEPA-related documents, or NEPA review forms have also been completed for many smaller projects initiated since the SWEIS was published. These projects are listed in Appendix B of the PID (BWXT Pantex 2001a). Because the associated NEPA reviews have indicated that no appreciable environmental impacts would be associated with these projects, they are not discussed individually in this SA. Future projects, whether new construction, modifications, or demolitions, that have not been described in the SWEIS or this SA will have appropriate NEPA reviews conducted prior to their start.

Every two years, an “umbrella” document that includes NEPA analysis for many well-defined, routine activities is prepared for use in evaluating proposed projects and activities at the Pantex Plant. The current document, *Routine Administrative and Operating Activities Planned at Pantex Plant for FY2001 and FY2002*, was approved on August 31, 2000 (M&H 2000e). Activities evaluated in this document

would be exempt from NEPA under 10 CFR 1021 Appendix D categorical exclusions and include routine maintenance, facility repair, plant rearrangements, certain building modifications, installation of data processing equipment, plant utilities, fabrication or modification of weapon tooling, procurements and purchased services planned for the various facilities at the Pantex Plant. After verifying that a proposed activity or project meets the criteria defined in this NEPA review document, any of these routine activities may be implemented without additional NEPA analysis.

1.6 Analysis Methodology and SA Organization

The SWEIS evaluated potential impacts from continued operation of the Pantex Plant over a period of approximately 10 years, from 1996 to 2006. This SA is prepared at the approximate midpoint to comply with DOE regulations that require site-wide EISs to be reevaluated every 5 years (10 CFR 1021.330). Accordingly, the format of this SA is structured to correspond with the SWEIS timeframe, presenting in Chapter 2 a quantitative evaluation of the changes that have occurred in the 5 years since the SWEIS was published (November 1996 through December 2001), followed by a more qualitative analysis in Chapter 3 of changes that are planned to occur over the balance of the SWEIS timeframe (2002–2006).

Figure 1–3 illustrates the review process used in this SA for evaluating the period November 1996 through December 2001. As this figure indicates, an initial screening review was conducted of new, modified, or proposed projects and missions; new regulations; and updated environmental and operating basis information. This review identified whether associated levels of activity or potential for impact to a particular resource area, either individually or cumulatively, warranted additional analysis. No further analysis was conducted for those resource areas for which it was evident from the initial screening that associated impacts would be minimal and within the baseline established in the SWEIS. These resource areas are discussed in Section 2.1 of this SA.

Other resource areas required a more detailed analysis to determine whether the potential impacts remain within the SWEIS baseline or had substantial new information available since the SWEIS was published with which to update the analyses. These resource areas, presented in Section 2.2, have been evaluated to determine whether the potential impacts are outside the envelope of consequences established in the SWEIS, and if so, whether those impacts could be considered significant within the context of NEPA (40 CFR 1508.27), and as such require the preparation of a new or supplemental EIS.

Chapter 3 discusses potential impacts of projects and activities proposed for implementation between 2002 and 2006. These projects are in various stages of implementation, ranging from early proposal to nearly complete. Some of these projects, though still not implemented, were proposed before, and evaluated in, the SWEIS; others have been proposed since that time. Projects that have progressed to the stage that design, environmental and/or safety documentation have been prepared have been evaluated more thoroughly than those that are less developed. The potential impacts of projects which cannot be evaluated in sufficient detail at this time have been acknowledged and included for completeness in this SA, but will be evaluated thoroughly prior to implementation, consistent with Pantex Plant NEPA review requirements.

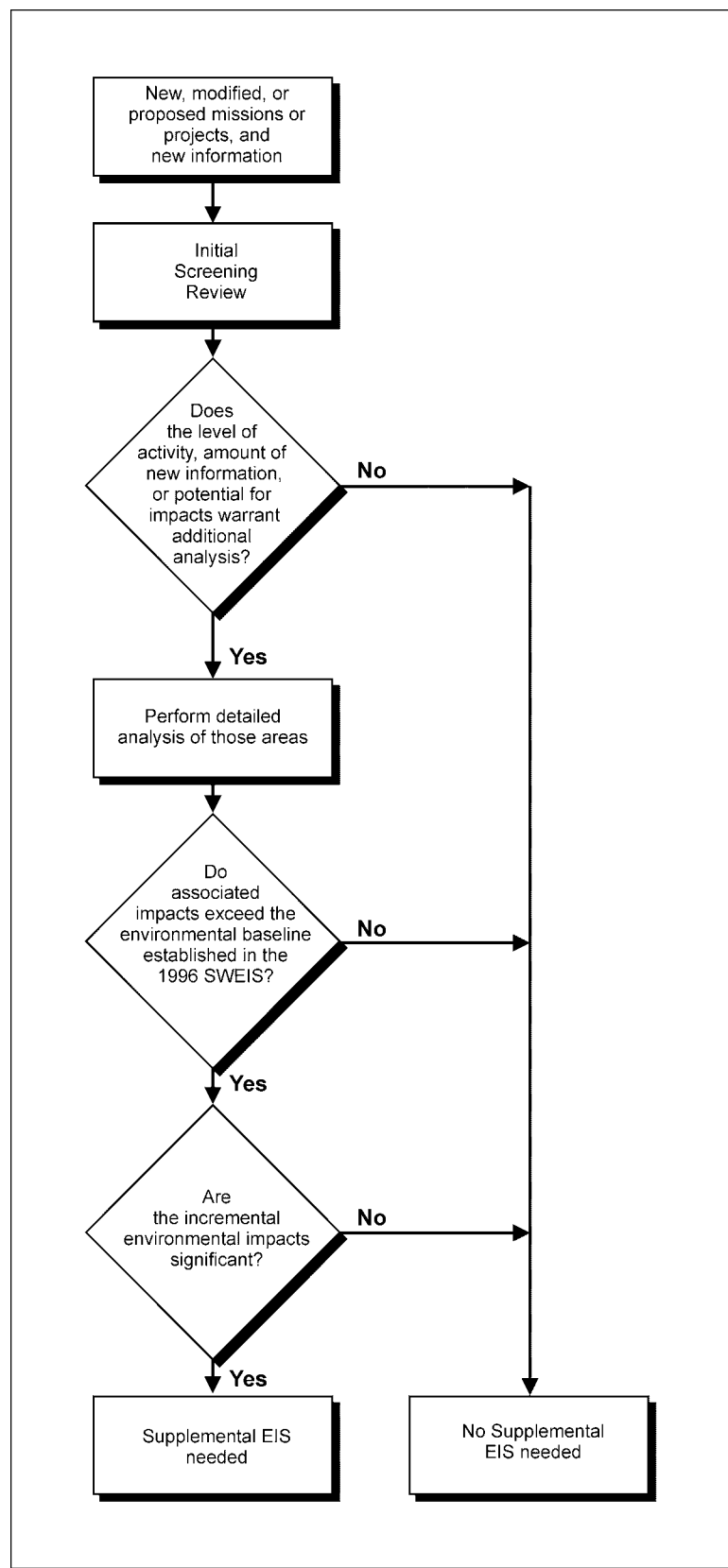


Figure 1–3. Analysis Method